

IN THE CLAIMS:

1. (previously amended) A soft flexible helical vasoocclusion coil for use with a wire having a distal end, said coil having:
 - (a) a proximal end adapted to detachably couple to the distal end of the wire;
 - (b) a distal end;
 - (c) said helical vasoocclusion coil comprising a multiplicity of windings having a first diameter immediately adjacent said distal end and said proximal end; and
 - (d) said helical vasoocclusion coil being further wound into a second diameter smaller than said first diameter at said proximal end and at said distal end, whereby said proximal end and said distal end are positioned radially inwardly of said immediately adjacent first diameter, such that the coil acts to occlude a vessel or a cavity when placed within said vessel or cavity.
2. (canceled)
3. (original) The coil of claim 1 wherein said proximal end has a coupling member that detachably interlocks with the distal end of the wire.
4. (previously amended) An assembly for use in occluding a vessel or a cavity within a vessel comprising:
 - (a) an elongated wire having a distal end that carries a first coupling member; and
 - (b) a soft flexible helical vasoocclusion coil having:

(i) a proximal end that carries a second coupling member that is detachably coupled to the first coupling member;

(ii) a distal end;

(iii) said helical vasoocclusion coil comprising a multiplicity of windings having a first diameter immediately adjacent said proximal end and said distal end; and

(iv) said helical vasoocclusion coil being further wound into a second diameter smaller than said first diameter at said proximal end and at said distal end, whereby said distal end and the first coupling member at said proximal end are positioned radially inwardly of said immediately adjacent first diameter, such that the coil acts to occlude a vessel or a cavity when placed within said vessel or cavity.

5. (canceled)

6. (new) A soft flexible helical vasoocclusion coil for use with a wire having a distal end, the coil comprising:

(a) proximal end adapted to detachably couple to the distal end of the wire;

(b) distal end;

(c) the helical vasoocclusion coil comprising a multiplicity of windings having a first diameter between the proximal and distal ends; and

(d) the helical vasoocclusion coil being further wound into a second diameter smaller than the first diameter at the proximal end, whereby the proximal end is positioned radially inwardly

of the first diameter such that the coil acts to occlude a vessel or a cavity when placed within the vessel or cavity.

7. (new) The coil of claim 6, wherein the multiplicity of windings are immediately adjacent the proximal end, whereby the proximal end is positioned radially inwardly of the immediately adjacent first diameter.

8. (new) The coil of claim 6, wherein the helical vasoocclusion coil is further wound into the second diameter at the distal end, whereby the distal end is positioned radially inwardly of the first diameter.

9. (new) The coil of claim 8, wherein the multiplicity of windings are immediately adjacent the proximal and distal ends, whereby the proximal and distal ends are positioned radially inwardly of the immediately adjacent first diameter.

10. (new) The coil of claim 6, wherein the proximal end has a coupling member that detachably interlocks with the distal end of the wire.

11. (new) The coil of claim 6, further comprising fibers attached to the coil for facilitating embolization.

12. (new) The coil of claim 6, wherein the first diameter is between about 0.2 mm and about 30 mm.

13. (new) A soft flexible helical vasoocclusion coil for use with a wire having a distal end, said coil comprising:

(a) a proximal end adapted to detachably couple to the distal end of the wire;

(b) a distal end;

(c) a multiplicity of windings having a first diameter between the proximal and distal ends, the first diameter being between about 0.2 mm and about 30 mm; and

(d) the proximal end being wound into a second diameter smaller than the first diameter, whereby the proximal end is positioned radially inwardly of the first diameter such that the coil acts to occlude a vessel or a cavity when placed within the vessel or cavity.

14. (new) The coil of claim 13, wherein the distal end is wound into the second diameter at the distal end, whereby the distal end is positioned radially inwardly of the first diameter.

15. (new) The coil of claim 13, wherein the proximal end has a coupling member that detachably interlocks with the distal end of the wire.

16. (new) The coil of claim 13, further comprising fibers attached to the coil for facilitating embolization.